

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference T 44758WO/NZ/hs	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/DE2004/001398	International filing date (day/month/year) 01.07.2004	Priority date (day/month/year) 04.07.2003
International Patent Classification (IPC) or national classification and IPC G03B27/08, G03F7/20, G03F1/00, B42D15/10, B41 M3/14		
Applicant LEONHARD KURZ GMBH & CO. KG		

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>6</u> sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>	
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>	

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/DE2004/001398

Box No. I

Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____ which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-18 as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 1-22 received by this Authority on 21.07.2005 with letter of 21.07.2005
- nos.* _____ received by this Authority on _____
- ☒ the drawings:
- sheets 1/4-4/4 as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☒ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☒ the claims, nos. 23-24
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any table(s) related to sequence listing (specify): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any table(s) related to sequence listing (specify): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/DE2004/001398

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-22	
	Claims		NO
Inventive step (IS)	Claims	1-22	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-22	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Reference is made to the following documents:

D2: US 6 440 277 B1 (D AMATO SALVATORE F)

27 August 2002 (2002-08-27)

D4: US 5 933 219 A (UNNO YASUYUKI)

3 August 1999 (1999-08-03)

D5: US 5 624 773 A (PFORR RAINER ET AL)

29 April 1997 (1997-04-29).

1. **Document D2** is considered to be the prior art closest to the subject matter of **claim 1**. Said document discloses (the references in parentheses are to D2):

an exposure station for the production of partially formed regions in one or more layers of a web of film (b), said exposure station having one or more beam emitter(s) (d) for the exposure of the web of film, and further comprising:

- i) a masking strip (a) with partially formed regions that have varying optical properties;
- ii) the exposure station comprising two or more guiding means (c, s, t) for guiding the

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
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masking strip and/or for guiding the web of film, said means being so arranged that the masking strip is guided in an exposure area (e) in the beam path between the one or more beam emitter(s) and the web of film;

- iii) the exposure station comprising coupling means (c, s, t) for advancing the masking strip in the exposure region at the same speed as the web of film.

Thus, the subject matter of **claim 1** differs from the known exposure station in that the masking strip comprises a substrate of a material through which the exposure beam can pass, and also comprises partially formed regions with varying indices of refraction, varying polarisation properties or varying reflective properties.

The subject matter of **claim 1** is therefore novel (PCT Article 33(2)).

2. The problem addressed by the present invention can consequently be regarded as both that of making it possible to produce an exposure beam, said beam having partially varying optical properties corresponding to partially formed regions of the masking strip, and also that of providing an exposure station with improved options for varying the optical properties of the exposure beam.

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The solution to the above problem, as proposed in **claim 1** of the present application, involves an inventive step (PCT Article 33(3)). The reasons are as follows:

The exposure stations known from **D4** and **D5** respectively, which exposure stations have exposure masks with partially formed regions that have varying indices of refraction or varying polarisation properties, are used for the exposure of semiconductor wafers. Their use for exposing the web of film known from **D2** and the modification of the exposure stations by replacing the rigid exposure masks with masking strips is not discussed in the prior art documents or otherwise rendered obvious.

3. **Claims 2-19** are dependent on **claim 1** and, thus, also satisfy the requirements of the PCT in respect of novelty and inventive step.
4. For the same reasons, a method with the features according to **claim 20** and those according to **claims 21-22**, which are dependent on **claim 20**, satisfies the requirements of the PCT in respect of novelty and inventive step.